

## I. AMENDMENTS TO THE CLAIMS

1. (currently amended) A computer implemented method for an analysis of a plurality of software components prior to deployment, comprising:

using a data structure in a storage that provides, for each of the plurality of software components, a component deployment dependency data, an indication of necessary components for an operation of each of the plurality of software components being installed, and an indication of incompatibility with a previously installed component; and

using a computer connected to the storage and a program installed in a memory of the computer, performing the steps of:

determining a first plurality of components previously installed on ~~the a~~ system;

determining a second plurality of components to be installed on the system;

accessing a third plurality of component deployment dependency data;

determining a fourth plurality of components suitable for parallel installation; ~~and~~

determining an order in which the fourth plurality of components can be grouped for a fifth plurality of parallel installations;

accessing a sixth plurality of metadata from the data structure regarding the second plurality of components to be installed and accessing a seventh plurality of metadata regarding the first plurality of components previously installed; and

analyzing the sixth plurality of metadata to determine an eighth plurality of potential conflicts between the second plurality of components to be installed and the first plurality of components previously installed on the system;

wherein the pre-deployment analysis allows the second plurality of components to be installed in parallel and in a sequence of groups;

~~whereby wherein~~ an installation time is reduced; and

wherein the plurality of software components comprises an IBM® Websphere Application Server (WAS).

2. Cancelled.

3. (previously amended) The method of claim 1, further comprising updating the data structure with an identity of a ninth plurality of recently installed components.

4. (currently amended) The method of claim 1, further comprising providing a user with a plurality of options ~~infer~~ for the eighth plurality of potential conflicts.

5. (previously amended) The method of claim 4, wherein a first option includes aborting an installation.

6. (previously amended) The method of claim 4, wherein a second option includes continuing an installation.

7. (previously amended) The method of claim 6, further including, upon the exercise of the second option, recording an entry in a log indicative of a conflict and of a continuation of installation.

8. (previously amended) The method of claim 1, further comprising:  
initiating a removal of a component from the system; and  
identifying a tenth plurality of remaining components which depend on the component to be removed.

9. (previously amended) The method of claim 8, further comprising providing a user with a plurality of options if the tenth plurality of dependent remaining components is identified.

10. (previously amended) The method of claim 9, wherein a first option includes aborting a removal.

11. (previously amended) The method of claim 9, wherein a second option includes continuing a removal.

12. (previously amended) The method of claim 8, further comprising:

identifying a first component previously installed on the system which is dependent upon a removed component; and

determining an identity of a second component upon which the first component depends.

13. (currently amended) The method of claim 12, further comprising:

installing the second component upon which the first component depends; and creating a dependency link between the first component and the second

components~~component~~.

14. (currently amended) A system for an analysis of a plurality of software components to be conducted before installing the plurality of software components, comprising:

using a data structure in a storage that provides, for each of the plurality of software components, a component deployment dependency data, an identification of necessary components for an operation of each of the plurality of software components to be installed, and an identification of incompatibility with a previously installed component;

using a computer connected to the storage and to a system; and

using a program installed in a memory of the computer, the program comprising: means for determining a first plurality of components previously installed on the

system;

means for determining a second plurality of components to be installed on the

system;

means for accessing a third plurality of component deployment dependency data;

means for determining a fourth plurality of components suitable for parallel

installation; and

means for determining an order in which the fourth plurality of components can be grouped for a fifth plurality of parallel installations;

means for accessing a sixth plurality of metadata from the data structure regarding the second plurality of components to be installed and accessing a seventh plurality of metadata regarding the first plurality of components previously installed; and

means for analyzing the sixth plurality of metadata to determine an eighth plurality of potential conflicts between the second plurality of components to be installed and the first plurality of components previously installed on the system;

wherein ~~the~~ a pre-deployment analysis allows the second plurality of components to be installed in parallel and in a sequence of groups;

~~whereby wherein~~ an installation time is reduced; and

wherein the plurality of software components comprises an IBM® Websphere Application Server (WAS).

15. Cancelled.

16. (currently amended) The system of claim ~~14~~ 15, further comprising a means for loading an installation package including the data structure.

17. (previously amended) The system of claim 14, further comprising a ninth plurality of references among the components to be installed and located in the data structure.

18. (previously amended) The system of claim 17, further comprising a means for accessing the data structure.

19. (previously amended) The system of claim 14, further comprising a means for installing the second plurality of components across a plurality of enterprise resources.

20. (currently amended) A data structure encoded in a computer readable media and associated with a software component installation package adapted for execution on a computer, the data

structure adapted for identifying a third plurality of potential conflicts between a second plurality of components to be installed on a system and a first plurality of components previously installed on the system, comprising:

for each of the second plurality of software components, a component deployment dependency data, an indication of necessary components for an operation of each of the second plurality of software components, and an indication of incompatibility with one or more components of the first plurality of components; and

wherein an alert is automatically generated if an attempt is made to install a component having an indication of incompatibility; and

wherein the software component installation package is adapted for installation of an IBM® Websphere Application Server (WAS).

21. (currently amended) A computer program product of a computer-readable medium usable with a programmable computer, the computer program product having computer-readable code embodied therein for pre-deployment analysis of software components, the computer-readable code comprising instructions for:

determining a first plurality of components previously installed on the a system;  
determining a second plurality of components to be installed on the system;  
accessing a third plurality of component deployment dependency data;  
determining a fourth plurality of components suitable for parallel installation; and  
determining an order in which the fourth plurality of components can be grouped

for a fifth plurality of parallel installations;

accessing a sixth plurality of metadata from the a data structure regarding the second plurality of components to be installed and accessing a seventh plurality of metadata regarding the first plurality of components previously installed; and

analyzing the sixth plurality of metadata to determine an eighth plurality of potential conflicts between the second plurality of components to be installed and the first plurality of components previously installed on the system;

wherein the pre-deployment analysis allows the second plurality of components to be installed in parallel and in a sequence of groups;

whereby wherein an installation time is reduced; and

wherein the second plurality of components comprises an IBM® Websphere Application Server (WAS).

22. Cancelled.

23. (Currently amended) The computer program product of claim ~~22~~21, further comprising instructions for updating the data structure with an identity of a ninth plurality of recently installed components.

24. (original) The computer program product of claim 21, further comprising instructions for providing a user with a plurality of options if a conflict is identified.

25. (previously amended) The computer program product of claim 24, wherein a first option includes aborting an installation.

26. (previously amended) The computer program product of claim 24, wherein a second option includes continuing an installation.

27. (previously amended) The computer program product of claim 26, further including instructions for, upon the exercise of the second option, recording an entry in a log indicative of the conflict and of a continuation of the installation.

28. (previously amended) The computer program product of claim 21, further comprising instructions for:

initiating a removal of a component from the system; and  
identifying a plurality of remaining components which depend on the component to be removed.

29. (original) The computer program product of claim 28, further comprising instructions for providing a user with a plurality of options if a dependent remaining component is identified.

30. (original) The computer program product of claim 29, wherein a first option includes aborting the removal.

31. (original) The computer program product of claim 29, wherein a second option includes continuing the removal.

32. (original) The computer program product of claim 28, further comprising instructions for:  
identifying a first component previously installed on the system which is  
dependent upon a removed component; and  
indicating the identity of a second component upon which the first component  
depends.

33. (original) The computer program product of claim 32, further comprising instructions for:  
installing the second component upon which the first component depends; and  
creating a dependency link between the first and second components.

34. (currently amended) A method for installing a plurality of software components based upon a pre-installation analysis, comprising:

loading an installation package, the installation package including a data  
structure;

searching a target to which components are to be installed to identify a plurality of  
previously installed components;

for a first component, accessing, in the data structure, a component deployment  
dependency data, an indication of necessary components for an operation of the first  
component, and an indication of incompatibility with a previously installed component;;

analyzing a plurality of data from the data structure to determine a plurality of  
conflicts between the first component to be installed and the plurality of components  
previously installed on the system; and

wherein the plurality of software components comprises an IBM® Websphere  
Application Server (WAS).

35. (original) The method of claim 34, further comprising notifying a user of the conflict.

36. (original) The method of claim 34, further comprising aborting the installation if a conflict is detected.

37. (original) The method of claim 34, further comprising ignoring a detected conflict and continuing the installation.

38. (original) The method of claim 37, further comprising entering a note in a log of the conflict.

39. (previously amended) The method of claim 34, further comprising:  
initiating the removal of an installed component;  
accessing the data structure; and  
identifying a conflict if the installed component is removed.

40. (currently amended) The method of claim 34, further comprising:  
initiating an installation of a second component;  
searching a target to which the second component is to be installed to identify  
installed components;  
accessing the ~~component compatibility~~ data structure; and  
determining if all of the components required by the second component are  
installed.